

CHELMSFORD AMATEUR RADIO SOCIETY

NEWSLETTER No.233

July 1985

NEXT MEETING - QUIZ

If you missed the publicity in the last couple of Newsletters, may I remind you that the next meeting, on Tuesday, 2 July, will be a Quiz Challenge - CHELMSFORD vs. COLCHESTER.

For those who remember, it hardly seems possible that it is 17 years since the last match between the two clubs.

There will be two teams of three competing for a suitable Trophy. The fun will start at 7:30pm in the Marconi College, Arbour Lane, Chelmsford.

RAFFLE

This month, in addition to the usual raffle, we will draw the Jackpot Raffle and the lucky winner may select from the R.S.G.B. Book List to the value of £6.00.

DATES FOR YOUR DIARY

- 2 July. - Radio Quiz: Chelmsford vs Colchester.
- 6 Aug. - Junk Sale.
- 3 Sep. - HF Antennas: By the man himself, Louis Varney, G5RV.
- 1 Oct. - C.A.R.S. AGM.
- 5 Nov. - Satellite TV: John Donnithorne, G8MKX.

CQ DIXIE.2 - Bill, G4JUW

Following my piece in the newsletter about the proposed contact between our society and the Central Georgia Radio Club, I have been in contact with Bill Atkins, their Secretary and I have suggested that we meet on 20 metres on Sunday 30th of June at 1630 gmt. The frequency we will try is 14.338 MHz. This is in the General part of the band and therefore will not exclude any members across the pond.

I don't think the net will be too crowded, so if you have the time please listen for N4BHB, KC4WU, KF4FR or me, G4JUW.

(Ed. note:- This news relayed via ASCII on 2 metres from G4JUW to G3PMX.)

MEMBERS NEWS

The Society extends a welcome to Peter Shaw, G6TFB.
Congratulations to Paul Clark on his call G0BTH.

JUNE CONSTRUCTORS' COMPETITION - A JOINT REPORT

Judges: John Donnithorne, G8MKX.

John Bowen, G8DET.

It is good to see that the spirit of construction is very much alive even when many amateurs now use a commercially produced main rig.

The overall standard of presentation was higher than in some previous years, the home brew now matching the bought, pleasing both the XYL and the eye of visitors to the shack.

OPEN SECTION:

G3WHR, Dick: AF Oscillator

This useful piece of test equipment was needed for audio testing. The Wein Bridge oscillator was made up from a design from Maplin, complete with more distortion than advertised (0.1% at 1kHz instead of 0.01%). Dick found he really needed an antilog potentiometer to un-reverse the frequency scale. The PCB had to be modified and an extra bit glued on the end to enable it to fit the box. The Letraset lettering looked good.

Comment: Get the case before designing the PCB!

G4JUW, Bill: Automatic Keyer

This was built from details published in RadCom (May 1977 and February 1980). A double sided PCB was made, components added, and the whole mounted in a case modified to house a paddle neatly made out of relay spring contacts. The output was originally relay driven but Bill modified it to use a BCY50 transistor.

Comment: A complex PCB for home construction which should have been available from the original art work. Try and find someone else who has made the device. If you are the first, write and tell the author of your experiences.

G4KQE, Andrew:

a) Stereo Tape Recorder.

This was a project started 13 years ago from Practical Wireless (January 1971) and used a BSR TD2 deck. Its performance had been "awful" so it had been banished to the loft. Recent re-examination showed that it was prone to earth loop noise, requiring two Veroboard circuits to be replaced with home constructed (Dalo Pen) PCBs with isolated earthing arrangements. Stout earth wires also helped. As it was home constructed, the choice of stereo or single channel record could be selected, the latter for home-movie use. The case was veneered chip board with Fablon covered Letraset legend.

b) Nicad Charger
To satisfy the need a switched box was made to charge a range of Nicads. The circuit used a BC107 as a constant current source. A plug-in timer ensured that the cells were never overcharged. A diode protected against accidental discharge at the end of the run, or if the power failed.

Comment: The tape recorder is a complex project for home construction. Very few recorders are ever completed (including a couple from G8DET). So, others, take heart. Don't put it in the bin - have a word with Andrew. The charger was useful and could easily be made from junk box bits. Awarded 3rd Prize.

G4T00, Martyn:

a) QRP Transmitter

A bag of crystals purchased at the CARS junk sale had frequencies falling in the 80m CW band, so a QRP transmitter was constructed to a basic design by the Rev. Dobbs using a BFY51 and a 7400, to produce about 230mW output. A Mark II version was constructed next with a VMOS FET final instead to give 1W output. Construction was in die-cast boxes.

b) Automatic Key-to-Transmit Switch and Support for FT290

Martyn felt that his FT290 needed to be tilted up so that the digital display could be seen more easily when using it as a base station. This was nicely constructed out of varnished plywood. In the space available underneath, a small PCB was installed which plugged into the PTT socket (which also provided its power) and the key socket. This automatically operates the PTT when the key is used and, after a pre-set time, control returns to the microphone switch.

Comment: Items nicely constructed from rally bits which achieved their aims. Awarded 2nd Prize.

G6CMS, Mark: 10GHz Wideband Transceiver

Constructed using die cast boxes to prevent IF breakthrough and "birdies", it uses a Band 2 FM Tuner for the 100MHz IF and fine tuning. This is followed by a Mutek 10.7MHz IF and audio board. Coarse tuning is provided by a threaded plastic knitting needle wound into the Gunn oscillator cavity. Instrumentation was provided for tuning etc. A 30dB dish was fed from a slot-fed waveguide.

Comment: A very well made unit which fully incorporates all aspects of home construction. Awarded 1st Prize.

NOVICE SECTION

G4ZMQ, Max: Dummy Load

This dummy load was constructed out of a number of 5W resistors mounted in a syrup tin. It had a LED to indicate when 5W was dissipated. It was filled with sand, instead of the more usual oil, this being less messy.

Comment: A neatly made essential for all shacks.

G0BDS, Brian: Aerial Tuning Unit

This was constructed to match random lengths of wire for HF. The components were purchased at rallies and the chassis was bent out of stout aluminium sheet. The "T" circuit was discussed on the Club Net and, after some experimentation, works well. A band calibration chart was used rather than direct markings on the front panel, which was finished with Letraset.

Comment: A useful project for the shack. Awarded the Novice Prize.

RSGB HF NATIONAL FIELD DAY - Dick, G3WHR

We may be called amateurs but the performance of the NFD Team was one of the most professional I have witnessed. By the time I arrived on the site, the operating tent was up and the telomast was upright awaiting its new guys. It seemed as if everyone, even the visitors, knew what to do; nobody issuing orders, but everyone quietly getting on with the work.

One unexpected problem was the absence of two aged oak trees, which had been felled during the past year. Consequently, the long wire antenna for 160m had one unsupported span of approximately 500 feet. The station was assembled and tested with time to spare; enough to show the operators how to work the gear.

Once the contest was under way the search receiver revealed that 10m was open to Europe - must have been the weather - so we were soon scoring double points. Despite having one operator fewer than last year, the operators and loggers did really well, and the two sessions on 10m boosted our score. The logs have been checked and submitted to the RSGB.

Our claimed score is:

Band	1.8	3.5	7.0	14.0	21.0	28.0	Total
QSOs	66	141	98	99	25	57	486
Points	512	540	376	343	92	428	2291

DF NEWS: RSGB National Qualifying Event - Dick, G3WHR

We had a good turn-out, with 18 teams assembled on Tiptree Heath on Sunday, 19 May, for the start at 1:20pm.

Both signals were received and gave bearings nearly 180 degrees apart. So competitors had to decide between A or B first for their start.

Some chose A, which was Arthur, G3KPJ/P, hidden in the Wilderness near Woodham Walter. I helped him with the aerial, which led from bushes near the road, under power lines, across a swamp and two streams, with a dummy tee-in to be investigated as well: in total about 250m of wire.

The majority chose to begin with B, Ian, G4HKC/P, who had an even longer aerial stretched along a hedge near Highwoods to the north of Colchester. Several teams found the area very confusing, especially the housing estate not shown on even the latest map.

Afterwards, we gathered at the Prince of Wales for tea and the results, which were:

1	Colin Merry	Dartford Heath	1436	1538
2	Mike Hawkins	Chelmsford	1540	1443
3	Chris Plummer	Mid Thames	1544	1441
4	Bill Pechey	Mid Thames	1548	1445
5	Richard DeLaRue	Colchester	1550	1454
6	Brian Bristow	Mid Thames	1608	1457
7	Alan Williams	Braintree	1609	1501
8	Trevor Gage	Mid Thames	1611	1446
9	Peter Lisle	"	1619	1520
10	Bud Mephram	"	1620	1517
11	Geoff Foster	"	1621	1521
12	Roy Emeny	Colchester	1628	1522
13	Frank Pearson	Colchester	-	1521
14	George Smith	Southend	1545	-
15	Derek Newman	Mid Thames	-	1558
16	Pat Cranmer	Colchester	-	1558.5
17	Peter Larbalestier	Colchester	-	1559
18	Ray Goodearl	Mid Thames	-	-

Congratulations to the winner and to Chris Plummer and Bill Pechey, who qualify for the Final.

Future DF Dates:

28 June - Colchester.
14 July - Mid Thames.
19 July - Chelmsford.

SPECIAL EVENT STATION GB0CFS - Roy, G3PMX

On Sunday 9th June, a small group of C.A.R.S. members, under the leadership of Gwyn, G4FKH, operated a demonstration station at the CHELMSFORD FESTIVAL OF SPORT in Melbourne Park, Chelmsford. Using equipment kindly loaned by Gwyn, an H.F. station was on 20 metres CW throughout the afternoon making contact with Europe and the USA.

Some 2 metre FM contacts with local stations were also made during short periods of activity using "mobiles" parked near to the tent.

In all some 34 QSO's were completed, the only one that got away was Bob, W1HH, whom we heard but did not have sufficient power to reply - never mind, we will send him one of our special QSL cards anyway!

COMMITTEE MEETING

The July Committee Meeting will be held, as usual, in the bar of the Marconi College at 7:30pm on Wednesday, 10 July, 1985.

73 from your Secretary,
Ian, G4BYR.

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